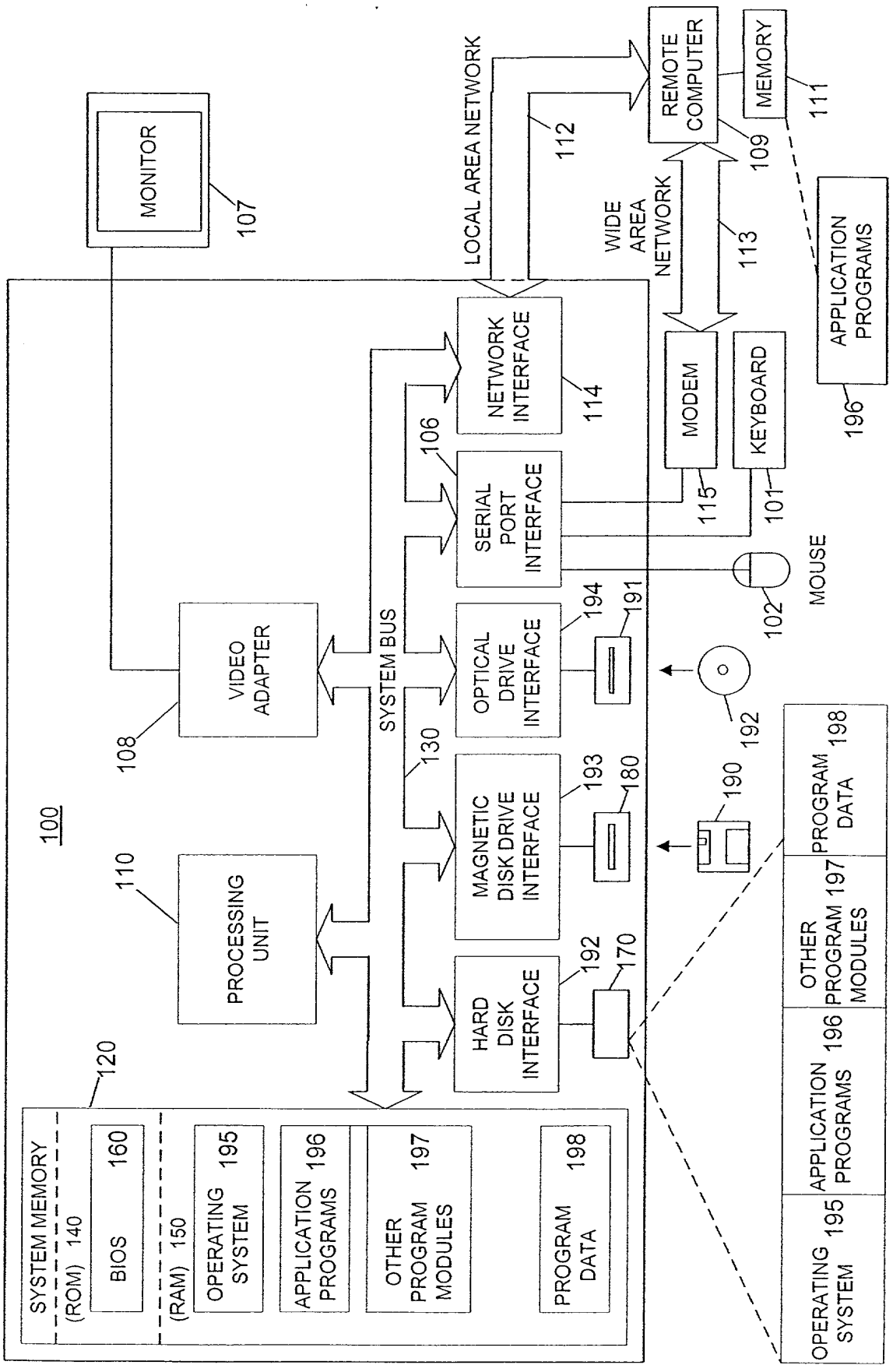


FIG. 1 (PRIOR ART)

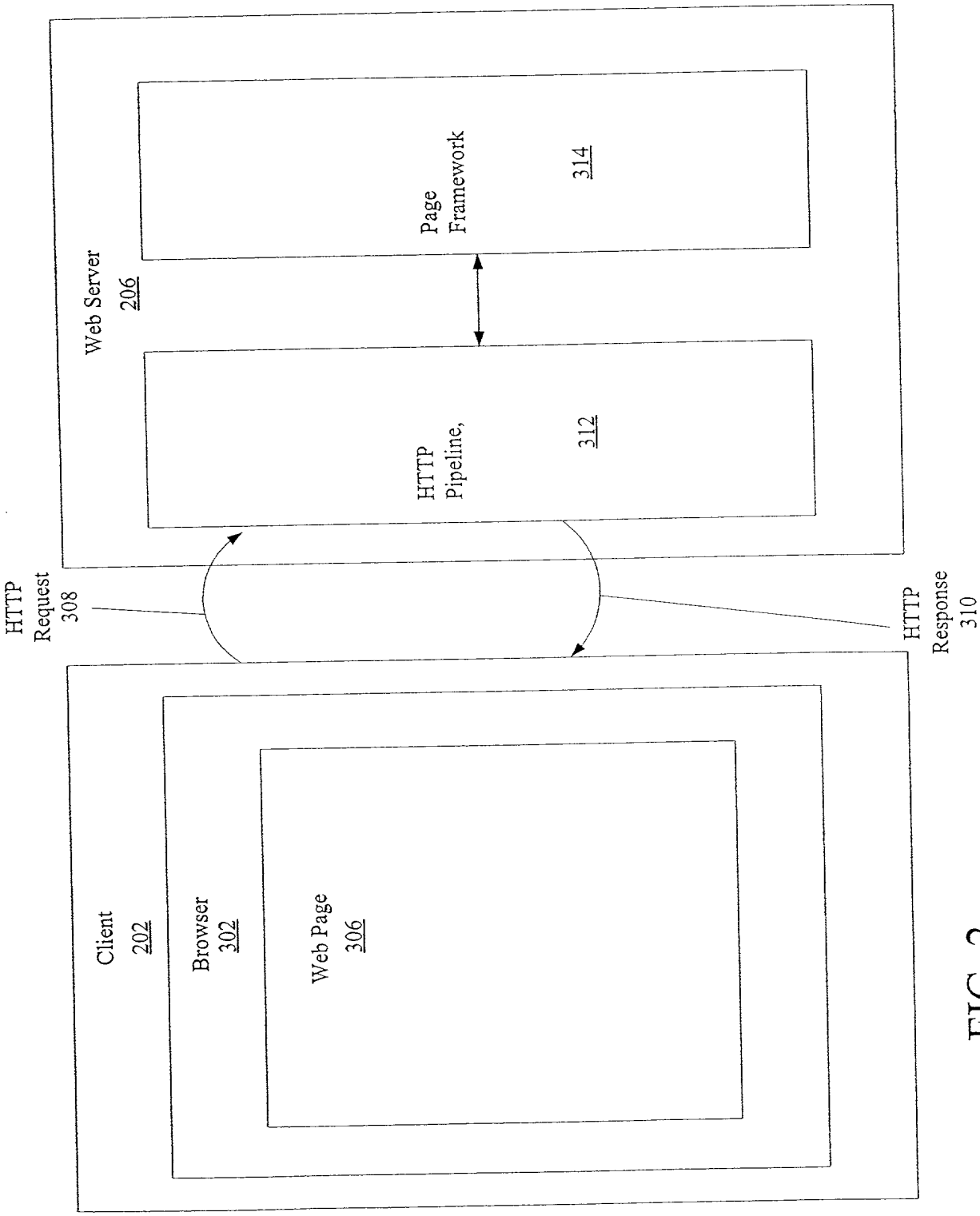

Client
202
Browser
302
Web Page
306
HTTP
Request
308
HTTP
Response
310
Web Server
206
HTTP
Pipeline,
312
Page
Framework
314

FIG. 2

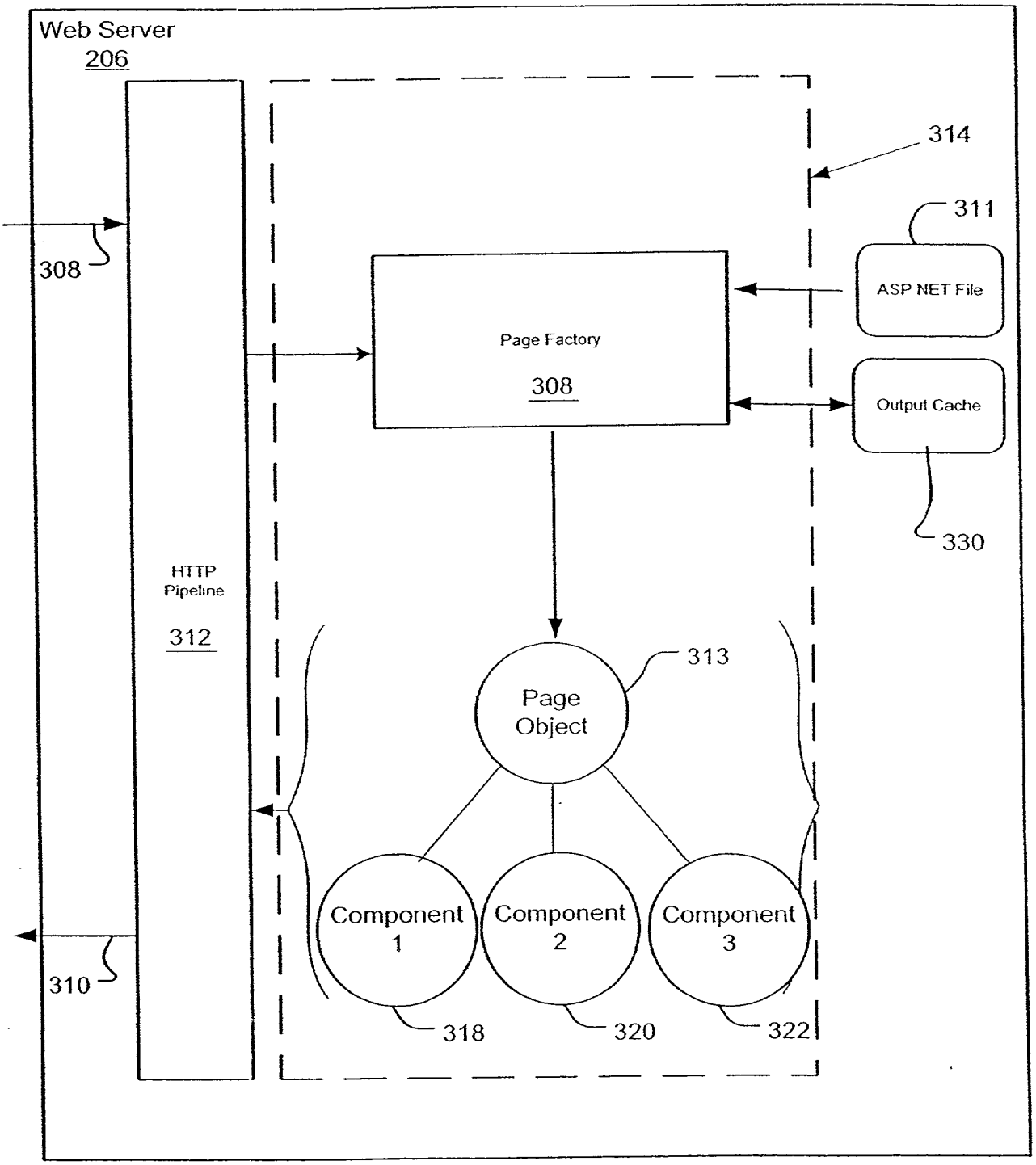

Web Server
206
314
311
308
ASP NET File
Page Factory
308
Output Cache
330
HTTP
Pipeline
312
313
Page
Object
Component
1
Component
2
Component
3
318
320
322
310

FIG. 3

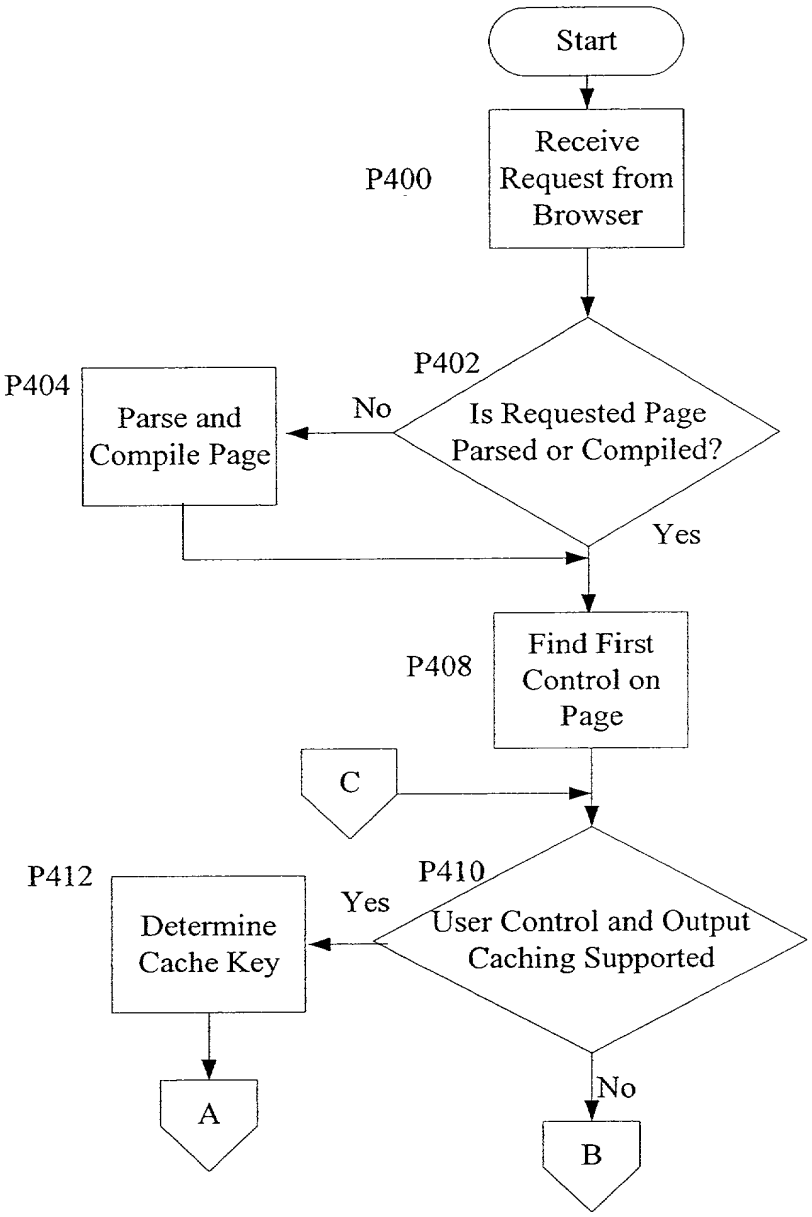

Start
P400
Receive Request from Browser
P402
Is Requested Page Parsed or Compiled?
No
P404
Parse and Compile Page
Yes
P408
Find First Control on Page
C
P410
User Control and Output Caching Supported
Yes
P412
Determine Cache Key
A
No
B

FIG. 4A

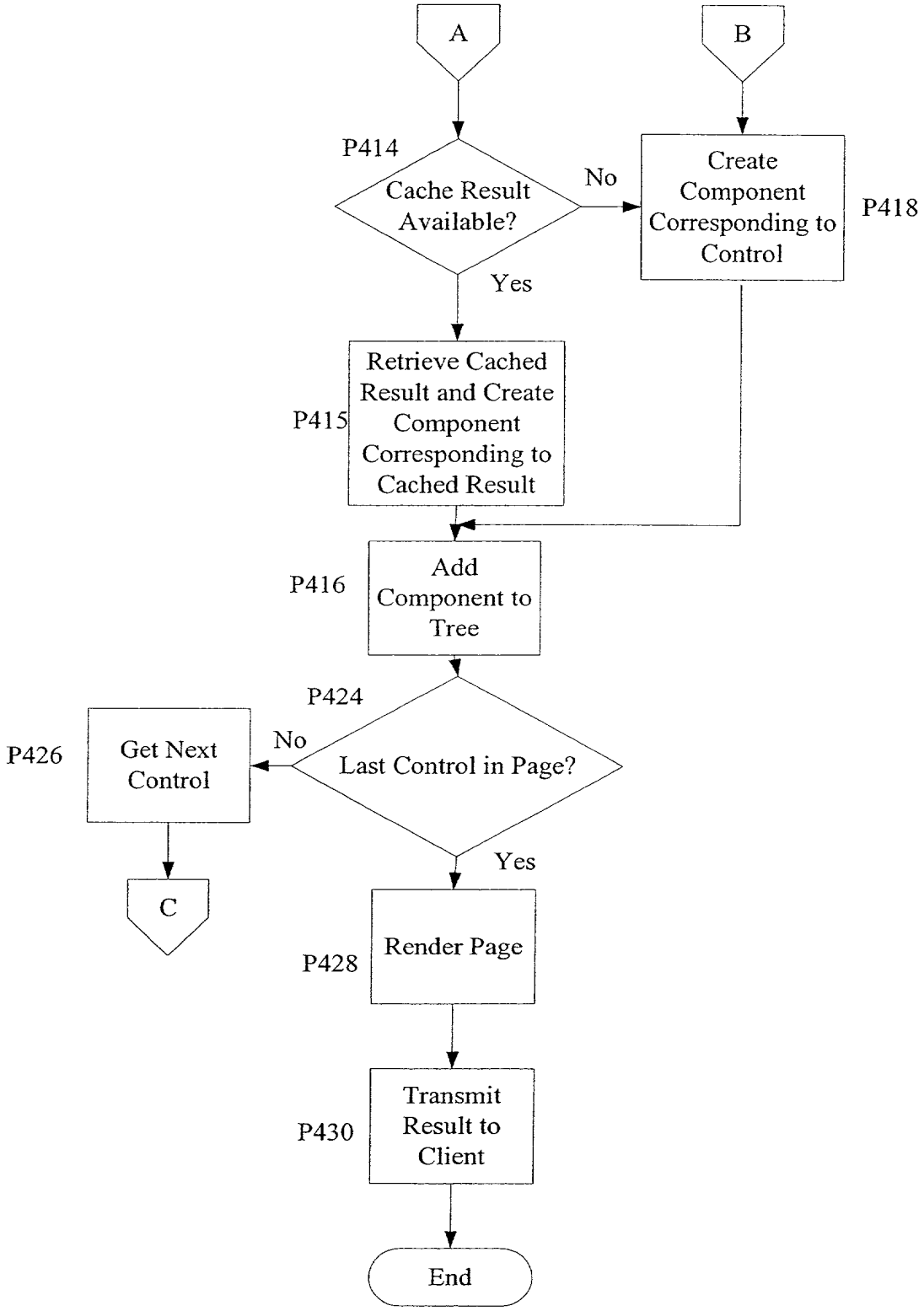

A
B
P414
Cache Result Available?
No
Create Component Corresponding to Control
P418
Yes
Retrieve Cached Result and Create Component Corresponding to Cached Result
P415
Add Component to Tree
P416
P424
Last Control in Page?
No
Get Next Control
P426
C
Yes
Render Page
P428
Transmit Result to Client
P430
End

FIG. 4B

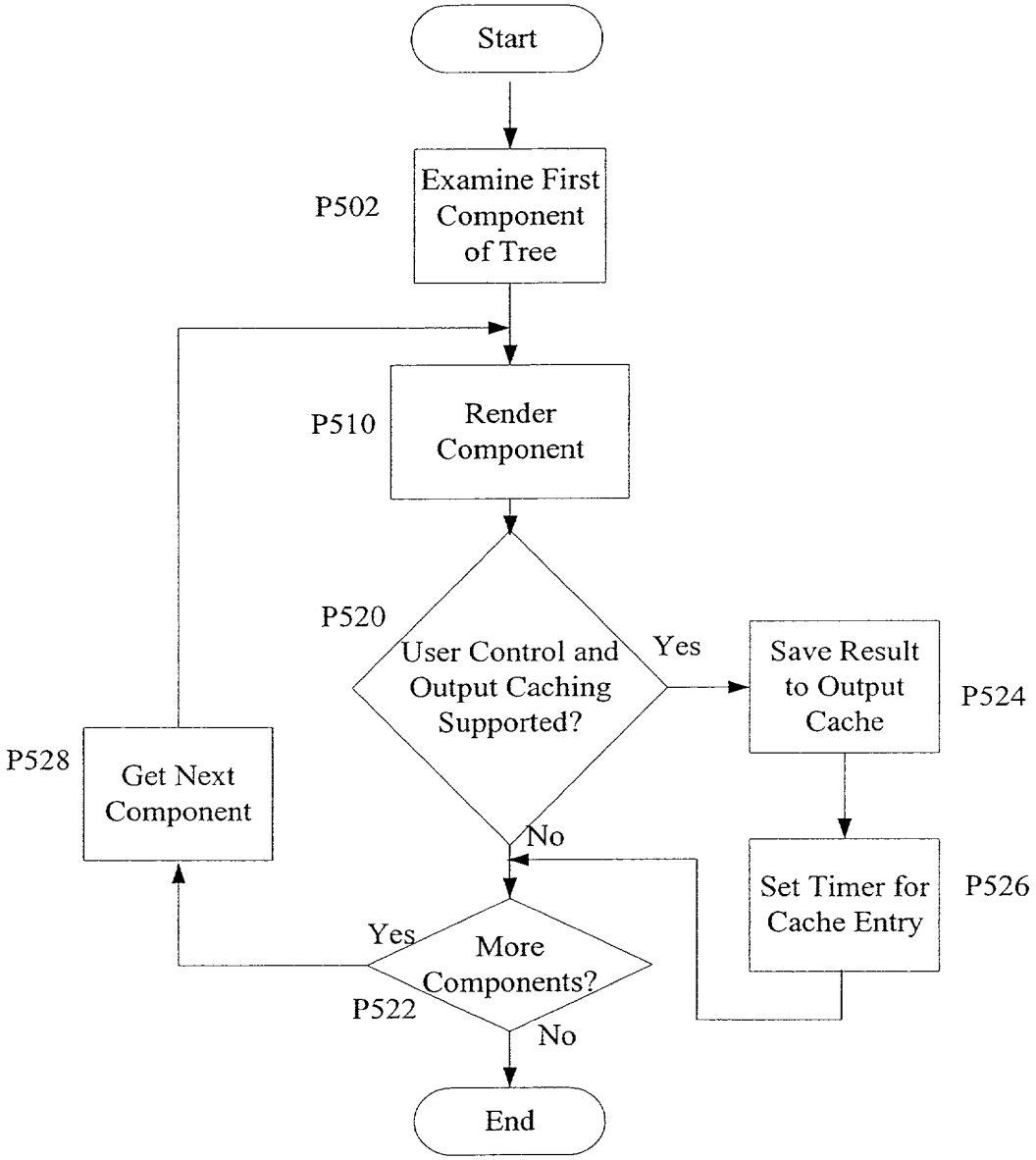

Start
P502
Examine First Component of Tree
P510
Render Component
P520
User Control and Output Caching Supported?
Yes
Save Result to Output Cache
P524
P526
Set Timer for Cache Entry
No
P528
Get Next Component
Yes
More Components?
P522
No
End

FIG. 5

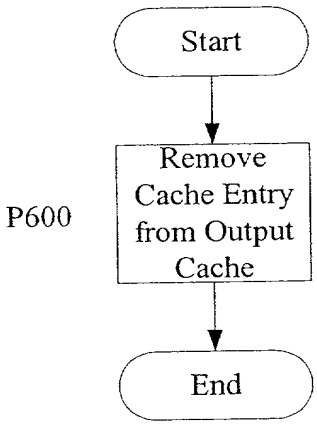


FIG. 6

Docket Alarm, LLC

T090Z0" 6E566860

U.S. Serial No.: unknown Atty. Dkt. No.: 03797.00127
Inventor: David EBBO et al.
Title: PARTIAL PAGE OUTPUT CACHING

700

```
1   <%@ Register TagPrefix="Fragment" TagName="Simple" Src="fragment.ascx" %>

2   <Script Language="C#" runat=server>
3    public void Page_Load(){
4     DateTime Created = DateTime.Now;

5     CreatedStamp.InnerHtml = Created.ToString("r");
6    }
7   </Script>
8   <Font size=6>Fragment Cache Simple example</Font>
9   <P>
10          <HR size=1>
11          <Fragment:simple id="UserCon1" runat=server />
12          <HR size=1>
13          <Font size=6>This page was created at <Font color=red><B id=CreatedStamp
14  runat=server></B></Font></Font>
```

FIG. 7

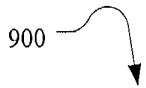
T09020 6E566860

800

```
1    <%@ Language="C#" %>
2    <%@ OutputCache Duration="10"%>

3    <Script runat=server>
4     public void Page_Load(){
5      // Get the Date and Time, once again this should not change after the first run
6      DateTime NowTime = DateTime.Now;
7      DateTime Expires = NowTime.AddSeconds(10);

8      CreatedStamp.InnerHtml = NowTime.ToString("r");
9      ExpiresStamp.InnerHtml = Expires.ToString("r");
10    }
11   </Script>
12   <Font size=6> Fragment Cache created: <Font color=red><B id=CreatedStamp runat=server></B></Font>
13         <BR>
14         Fragment Cache expires: <Font color=red><B id=ExpiresStamp runat=server></B></Font></Font>
```

FIG. 8

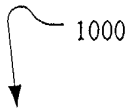
U.S. Serial No.: unknown Atty. Dkt. No.: 03797.00127
Inventor: David EBBO et al.
Title: PARTIAL PAGE OUTPUT CACHING




```
1   <%@ Register TagPrefix="Fragment" TagName="Simple" Src="fragment.ascx" %>

2   <Script Language="C#" runat=server>
3     public void Page_Load(){
4       DateTime Created = DateTime.Now;

5       CreatedStamp.InnerHtml = Created.ToString("r");
6     }
7   </Script>

8   <Font size=6>Fragment Cache VaryByControl example:</Font>
9   <P>
10  <HR size=1>
11  <Fragment:simple id="UserCon1" runat=server />
12  <HR size=1>

13  <Font size=6>This page was created at <Font color=red><B id=CreatedStamp runat=server></B></Font></Font>
```

FIG. 9

U.S. Serial No.: unknown Atty. Dkt. No.: 03797.00127
Inventor: David EBBO et al.
Title: PARTIAL PAGE OUTPUT CACHING




```
1    <%@ Language="C#" %>
2    <%@ OutputCache Duration="60" VaryByControl="Category"%>

3    <Script runat=server>
4     public void Button_Click(Object sender, EventArgs e){
5      if (Category.Value == ""){
6       Response.Cache.SetNoServerCaching();
7       CategoryItem.InnerHtml = "Not cached...";
8      }
9      else
10      CategoryItem.InnerHtml = "You selected: <font color=red>" + Category.Value + "</font>";
11    }

12    public void Page_Load(){
13     // Get the Date and Time, once again this should not change after the first run
14     DateTime NowTime = DateTime.Now;
15     DateTime Expires = NowTime.AddSeconds(60);

16     CreatedStamp.InnerHtml = NowTime.ToString("r");
17     ExpiresStamp.InnerHtml = Expires.ToString("r");
18    }
```

FIG. 10A

U.S. Serial No.: unknown Atty. Dkt. No.: 03797.00127
Inventor: David EBBO et al.
Title: PARTIAL PAGE OUTPUT CACHING

```
19    </Script>
20    <form runat=server>
21          <%=Request.QueryString["state"]%>
22          <BR>
23          Category:
24          <select id="Category" size=1 runat=server>
25                <option value="">
26                      <!--Select Category-->
27                </option>
28                <option>
29                      psychology
30                </option>
31                <option>
32                      business
33                </option>
34                <option value="Popular Computer">
35                      popular_comp
36                </option>
37          </select>
38          <input type=submit value="Lookup" OnServerClick="Button_Click" runat=server>
39    </form>
40    <Font size=6><B id=CategoryItem runat=server></B>
41          <P>
42                Fragment Cache created: <Font color=red><B id=CreatedStamp runat=server></B></Font>
43                <BR>
44                Fragment Cache expires: <Font color=red><B id=ExpiresStamp runat=server></B></Font>
45    </Font>
```

FIG. 10B

U.S. Serial No.: unknown Atty. Dkt. No.: 03797.00127
Inventor: David EBBO et al.
Title: PARTIAL PAGE OUTPUT CACHING